Small Business Innovation Research/Small Business Tech Transfer

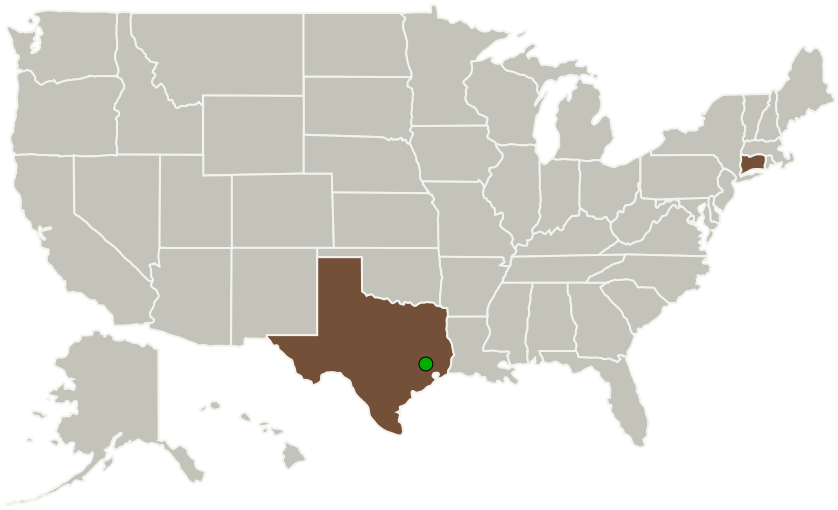
Design of a Self Don/Doffing Rear Entry Planetary Suit to Interface with a Suit Port/Lock, Phase I

Completed Technology Project (2011 - 2011)

Project Introduction

Under Phase 1 of subject SBIR, Air-Lock, Incorporated will design a self donning and doffing Rear Entry Hard Upper Torso (REHUT) that interfaces with a suit port. This design will allow suited, pressurized crewmembers to mate/demate their suits to/from suit ports located on lunar or planetary habitats, rovers, etc. This is a significant activity because it minimizes concerns over dust entering the habitat during crewmember entry/exit and it maximizes the habitat's working volume by eliminating the need for airlocks. For the purpose of this SBIR, the baseline architecture being will focus on NASA JSC's MK-III advanced spacesuit and the suit port being utilized by the Lunar Electirc Rover (LER).

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Air-Lock, Inc.	Lead Organization	Industry	Milford, Connecticut
Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas

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Primary U.S. Work Locations	
Connecticut	Texas

Project Transitions

February 2011: Project Start

September 2011: Closed out

Closeout Documentation:

- Final Summary Chart*(https://techport.nasa.gov/file/138082)*

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Organization:

Air-Lock, Inc.

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Project Management

Program Director:

Jason L Kessler

Program Manager:

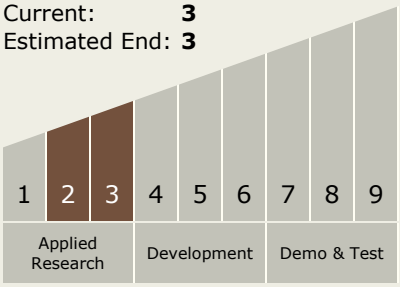
Carlos Torrez

Principal Investigator:

Brian Battisti

Technology Maturity (TRL)

Start: **2**
Current: **3**
Estimated End: **3**



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Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - TX06.2 Extravehicular Activity Systems
    - TX06.2.1 Pressure Garment

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System